Armed Services Blood Program

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619-532-9313/9356/9357
DSN 522-9356

References

- *NAVMED P-6530* **Joint Blood Program Handbook**

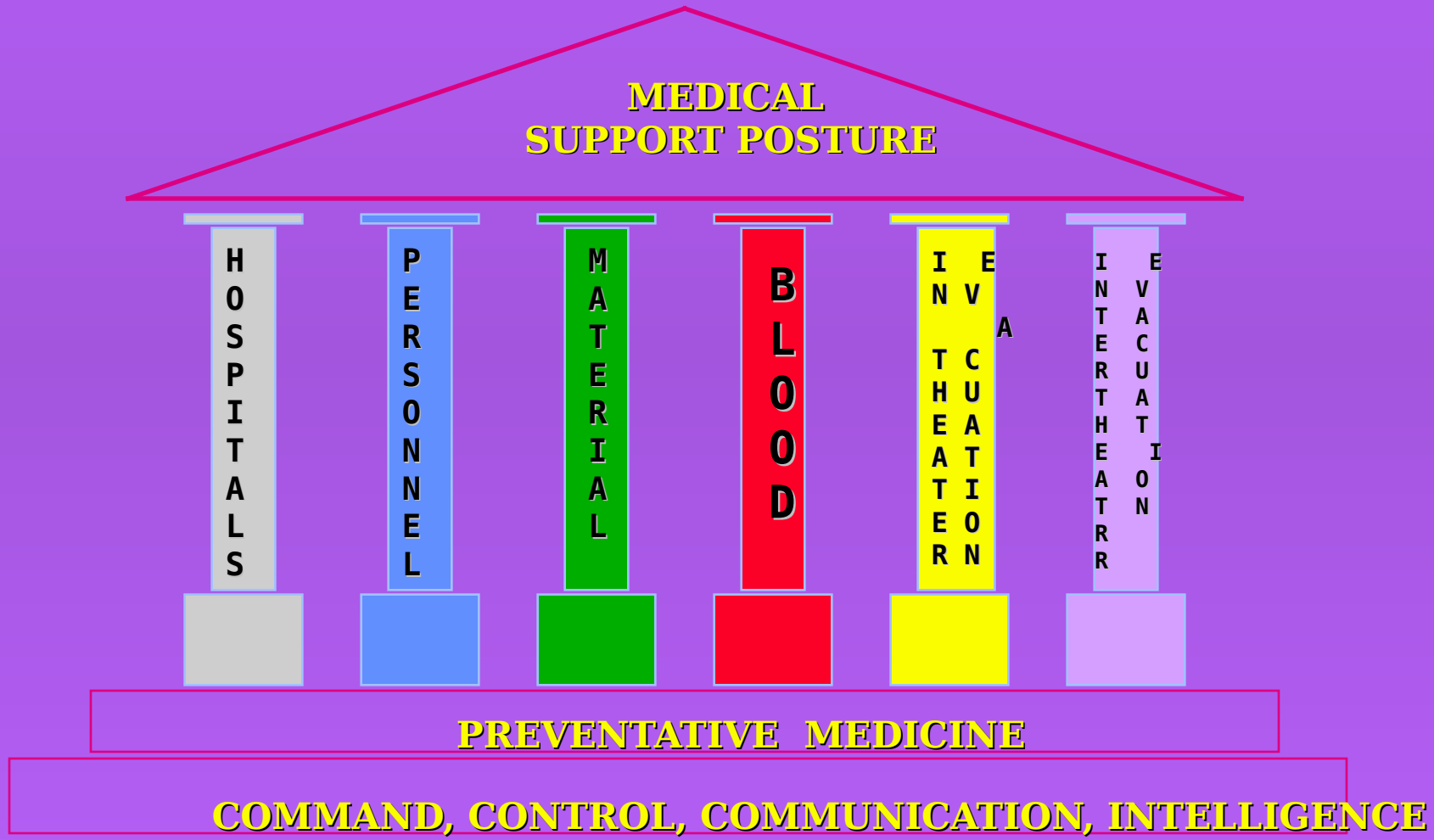
- *OPNAVINST 6530.4B draft* **DON Blood Program**

- *NAVMED P-5123* **Operational Procedures for Military BDCs & ASWBPLs**

- *OPNAVINST 6530.2C* **Donor Support**

ARMED SERVICES BLOOD PROGRAM

Medical Sustainability Analysis



ARMED SERVICES
DEPARTMENT OF THE NAVY
UNITED STATES MARINE CORP
DEPARTMENT OF THE AIR FORCE
UNITED STATES OF AMERICA
DEPARTMENT OF THE ARMY
UNITED STATES OF AMERICA
1775
DEPARTMENT OF THE NAVY
UNITED STATES OF AMERICA
BLOOD PROGRAM

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ASBPO VISION and MISSION

The Armed Services Blood Program Office (ASBPO) Through Its Coordination Role Will Ensure That Quality Blood Products, Blood Substitutes, and Blood Services are Provided to Improve Patient Care and Reduce Patient Risk for All Authorized Beneficiaries in Peace, Contingency, and War.

The Armed Services Blood program Office, a DoD Joint Health Agency, Coordinates, for the Assistant Secretary of Defense (Health Affairs) and the Joint Staff, the Worldwide Blood Programs of the Military Departments and the Unified Commands in Peace and War. The ASD(HA) Provides Policy Guidance; the Joint Staff Gives Operational Guidance; the Army is the Executive Agent.

ARMED SERVICES BLOOD PROGRAM

ASBPO

Joint Health Agency to monitor implementation of blood program policies established by the ASD(HA) and to coordinate the blood programs of the military services.

The ASD(HA) Provides Policy Guidance; the Joint Staff Gives Operational Guidance; the Army is the Executive Agent.

ARMED SERVICES BLOOD PROGRAM

ASBP Elements

- Service Blood Program Offices (SBPO)
- Blood Donor Centers (BDC)
- Armed Services Whole Blood Processing Labs (ASWBPL)
- Joint Blood Program Offices (JBPO)
- Area Joint Blood Program Offices (AJBPO)
- Blood Transshipment Centers (BTC)
- Blood Product Depots (BPD)
- Blood Supply Units (BSU)
- Medical Treatment Facilities (MTF)

ARMED SERVICES BLOOD PROGRAM

Blood Program Coordination

Blood Products

- **Red Blood Cells - Liquid**
  - **Expiration 35 Days (CPDA-1) or 42 Days (Additive)**
  - **Temperature 1 to 6C (Storage) or 1 to 10C (Shipment)**
- **Red Blood Cells - Frozen**
  - **Expiration 10 Years (Licensed) or 21 Years (Research)**
  - **Temperature < -65C (Storage) or < -40C (Shipment)**
- **Fresh Frozen Plasma/ or Solvent Detergent Plasma**
  - **Expiration 1 Year, Stored/Shipped At < -18C**
- **Platelets**
  - **Expiration 5 Days, Stored /Shipped At 20-24C**

From Donor to Final Product

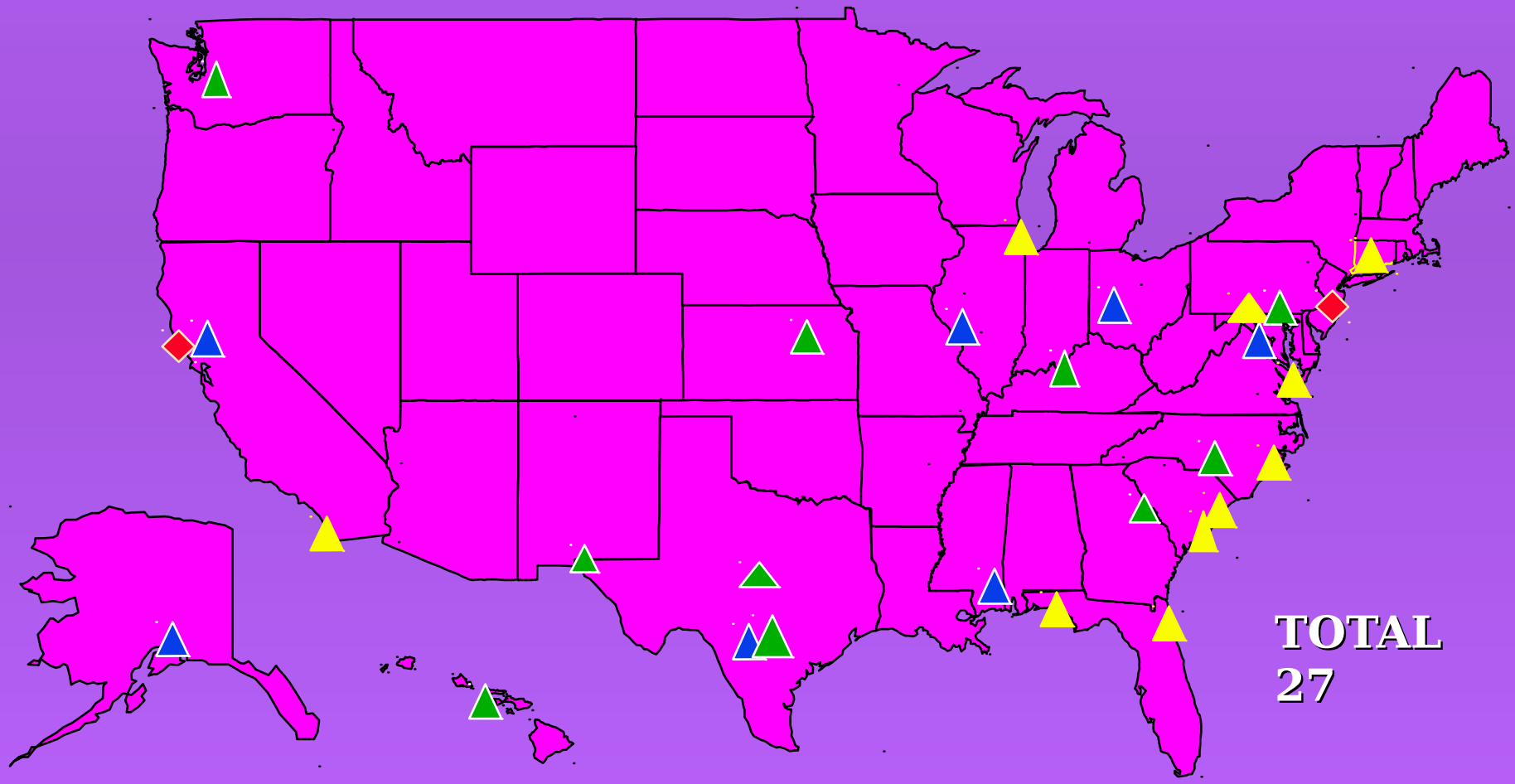
0,000 Blood Collections
om Military, Dependents
and DoD Civilians

Armed Services Blood Donor Centers

- Collect over 120,000 units per year from volunteers (Active Duty, Dependents, and DoD Civilians)
- Provides blood to meet peacetime needs and contingency/special operations requirements (Bosnia, Saudi Arabia, Haiti, Honduras, etc)
- Requires Command Support to encourage donations
- All blood donor centers licensed by the Food and Drug Administration
- Contingency Planning - 72 hrs minimum time from activation until first units available for shipment. Shelf stock available within 24 hrs

Armed Services Blood Donor Centers

- ASWBPL
- USA 10
- USN 10
- USAF 7



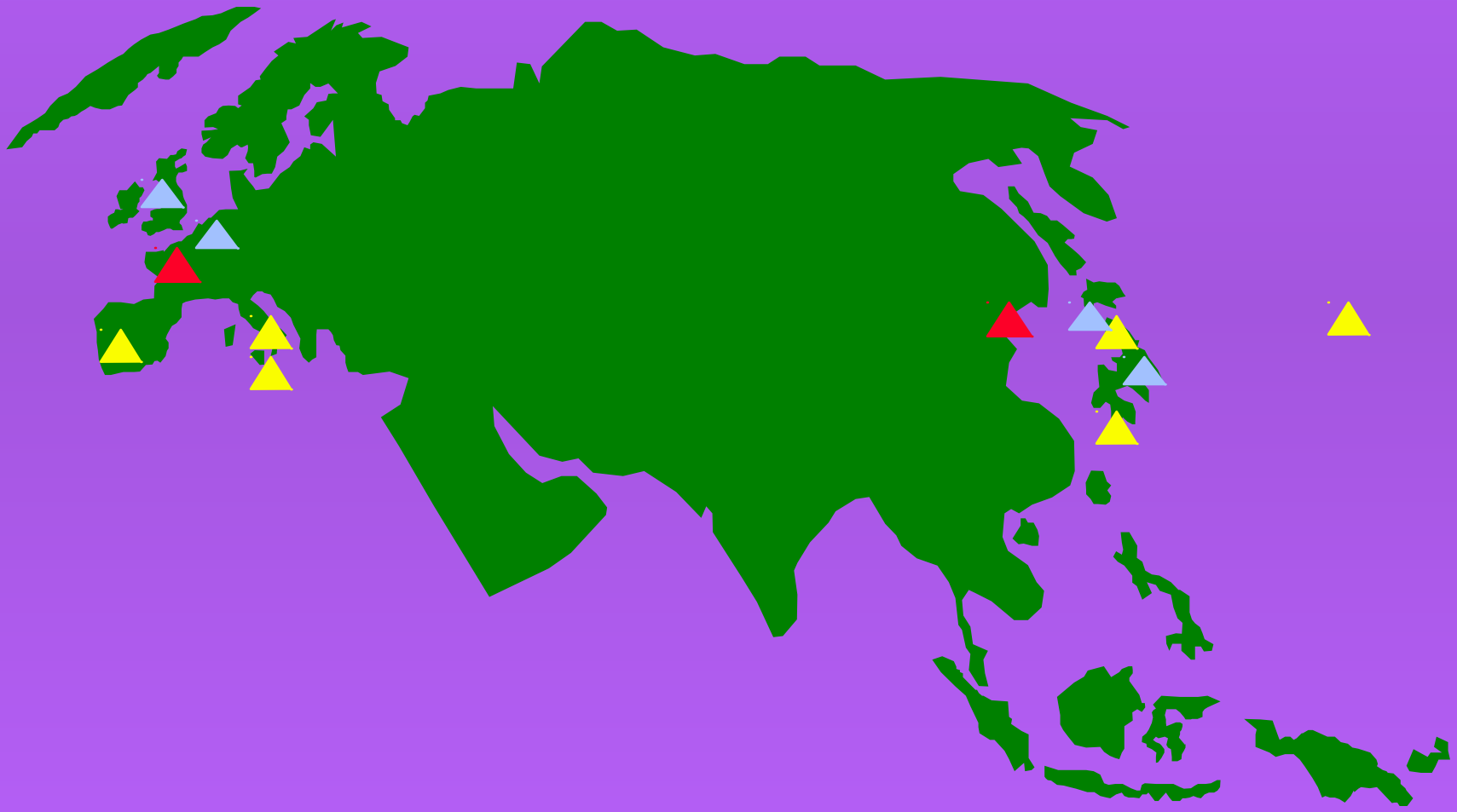
TOTAL 27

Armed Services Blood Donor Centers - Overseas

USA 2

USN 6

USAF 4

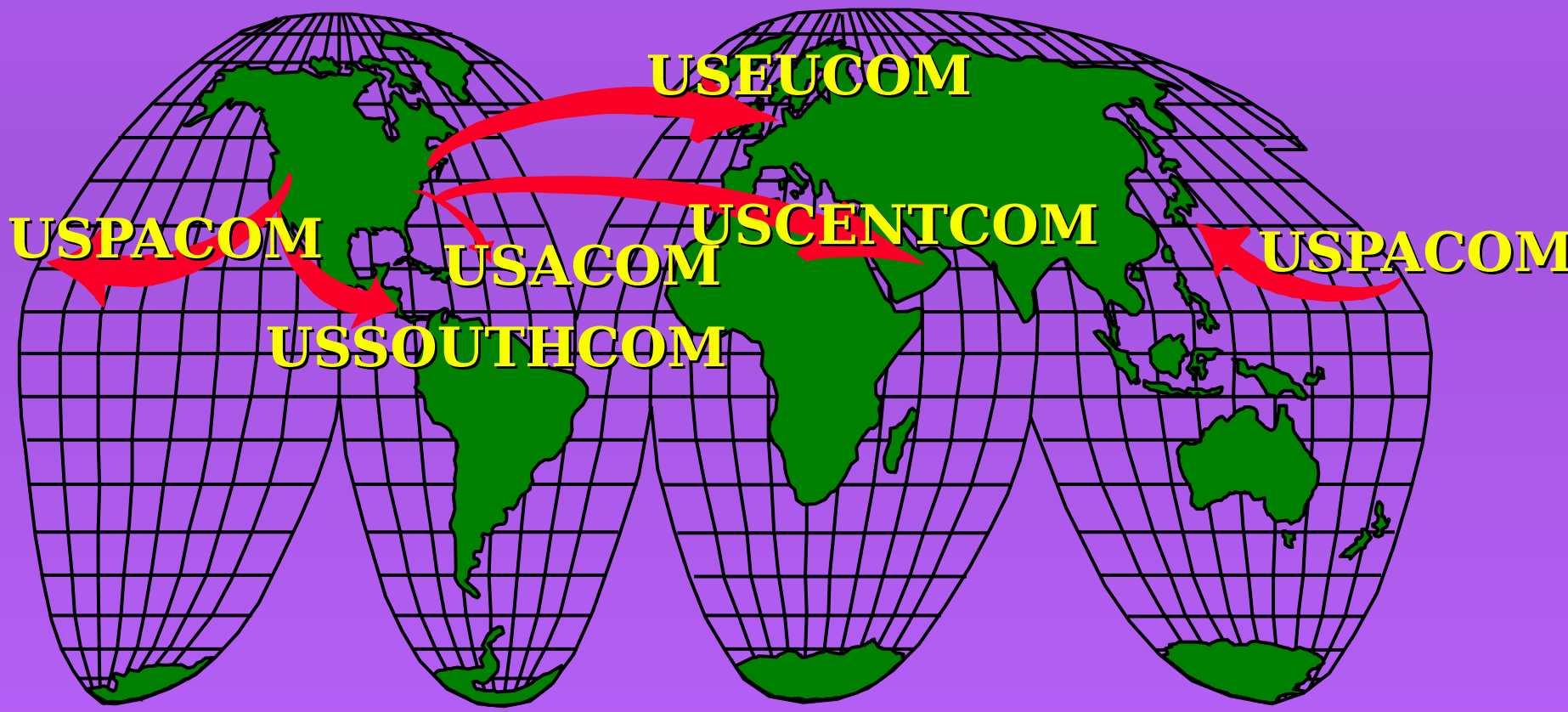


Navy Blood Regions Conus

- **Tricare 1: NNMC Bethesda (NABS)**
- **Tricare 2: NMC Portsmouth (MABS)**
- **Tricare 3: NH Jacksonville (FABS)**
- **Tricare 5: NH Great Lakes (NABS)**
- **Tricare 9: NMC San Diego (WABS)**

ARMED SERVICES BLOOD PROGRAM

Unified Commands



Unified Command Daily Blood Requirements

- **Requirements Set By Unified Commands**
  - **USEUCOM**
  - **USPACOM**
  - **USCENTCOM**
  - **USSOUTHCOM**
  - **USACOM**
- **Planning Factors**
  - **4.0 Units PRBC Per WIA/NBI**
  - **.08 Units FFP Per WIA/NBI**
  - **.04 Units Platelets Per WIA/NBI**

Unified Command Joint Blood Program Officers

- EUCOM - Maj Ron Fryar, HQ EUCOM, Active Duty, 011-49-711-680-7166/8317
- PACOM - CDR Randy Slater, Okinawa, Active Duty, 011-81-6117-437417
- USACOM - LCDR Frank Mettile, Active Duty (757) 322-6371
- USCENTCOM - Reserve (CDR Steve Wilson), POC is LTC Jansen, (813) 828-5801
- USSOUTHCOM - Reserve, POC is LTC Fairless, (305) 437-1328

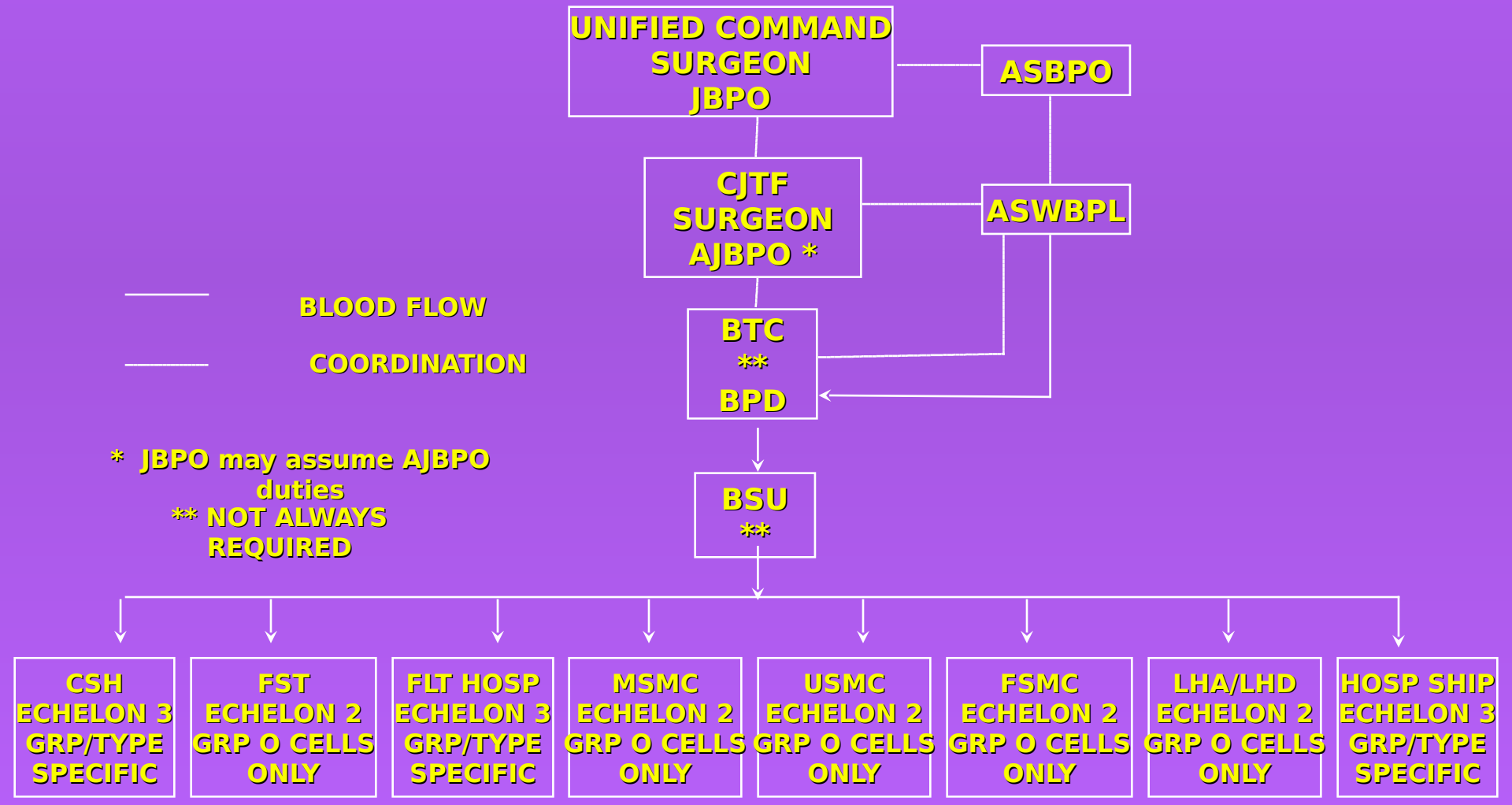
Unified Command Joint Blood Program Office (JBPO)

- **Command Surgeon's Staff**
- **Functions**
  - **Enforce DoD Blood Program Policies**
  - **Coordinate Component Blood Programs**
  - **Plan and Execute Blood Program Exercises and Operations**
  - **Single Manager - Theater Blood Distribution System**

Area Joint Blood Program Office (AJBPO)

- **Assigned Geographical Area by JBPO**
- **Functions**
  - **Enforce DoD Blood Program Policies**
  - **Coordinate Component Blood Programs**
  - **Plan and Execute Blood Program Exercises**
  - **Coordinate blood Management with JBPO**
  - **Single Manager - Area Blood Distribution System**

JOINT BLOOD PROGRAM
CONCEPT OF OPERATIONS



Reporting Requirements

- **Reports**
  - **Blood Report (BLDREP)**
  - **Blood Shipment Report (BLDSHPREP)**
  - **Situation Reports (ASWBPL/ASBPO SITREP)**
  - **Medical Status Report**

Reporting Requirements

- **Communication Modes - Dependent on Classification**
  - **Message Traffic**
  - **Secure/Unsecure Phone - Voice Template**
  - **Automation - EMAIL, DBSS**
  - **Courier**

HOW DO I GET BLOOD

- Identify Requirement to JTF Surgeon/Unified Command Surgeon and Unified Command JBPO
- Contact Service Blood Program Office
  - Air Force, Bolling AFB: 202 767-5544
  - Navy, BUMED: 202 762-3434
  - Army, MEDCOM, TX: 210 221-6344
- Blood supplied from ASWBPL before departure or just after arrival. Resupply (30 days) to AF Airheads or Major Airline Destinations

ARMED SERVICES BLOOD PROGRAM

Call for Blood

OPERATION

UNIFIED COMMAND (JBPO)

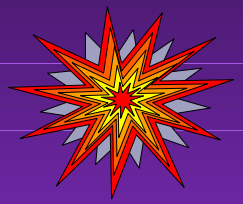
JOINT STAFF

ASBPO

Armed Services Blood Program

OPERATIONS OVERVIEW TIME CONSIDERATIONS

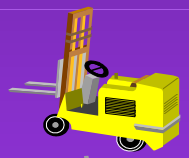
DELIBERATE PLANNING



C-day C+1 C+2 ALD C+3 C+4 EAD C+5 C+6 C+7 C+8 C+9 C+10 LAD-RDD

Date of Notification

Shelf Stocks from BDCs arrive at ASWBPLs

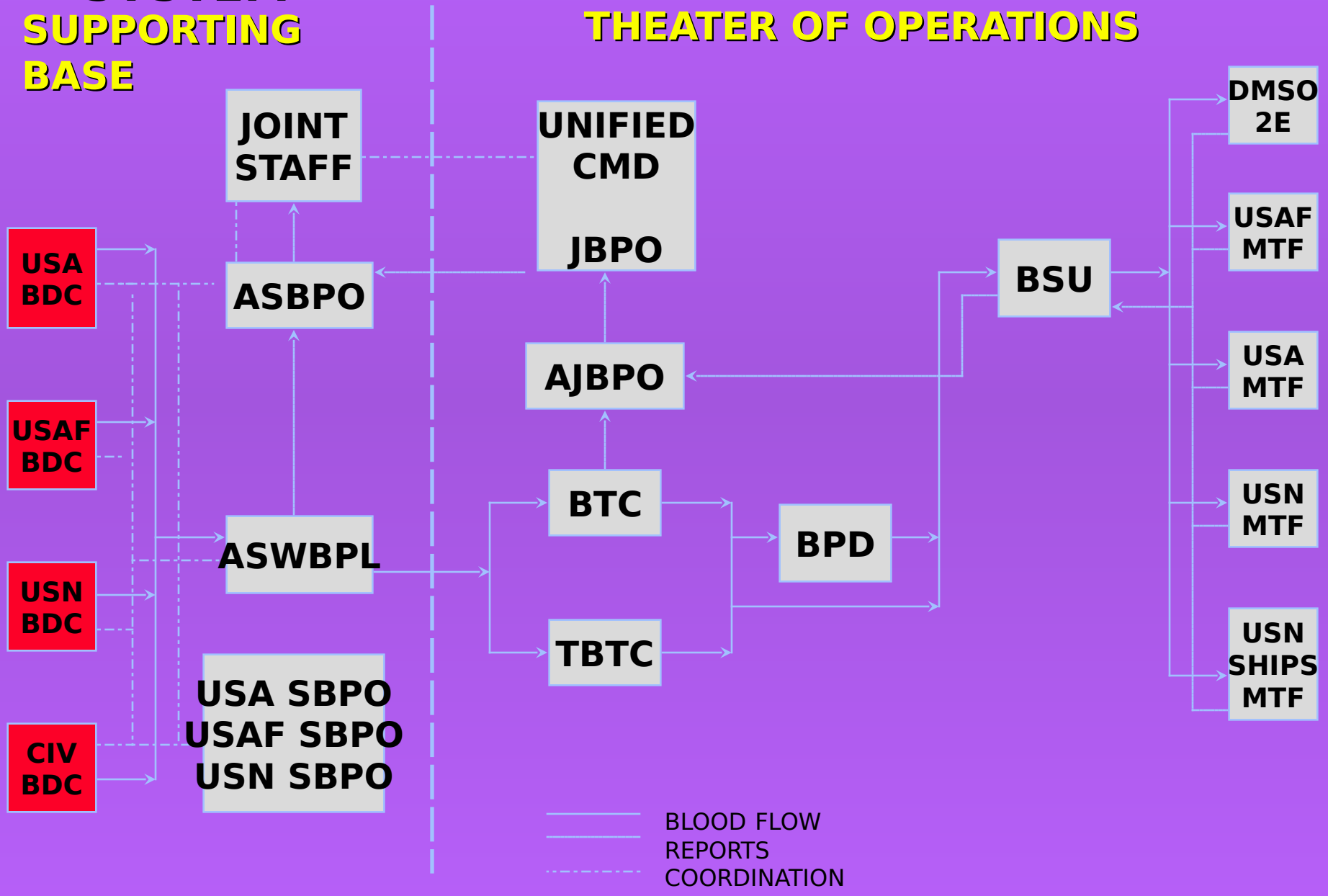


Available to load Date

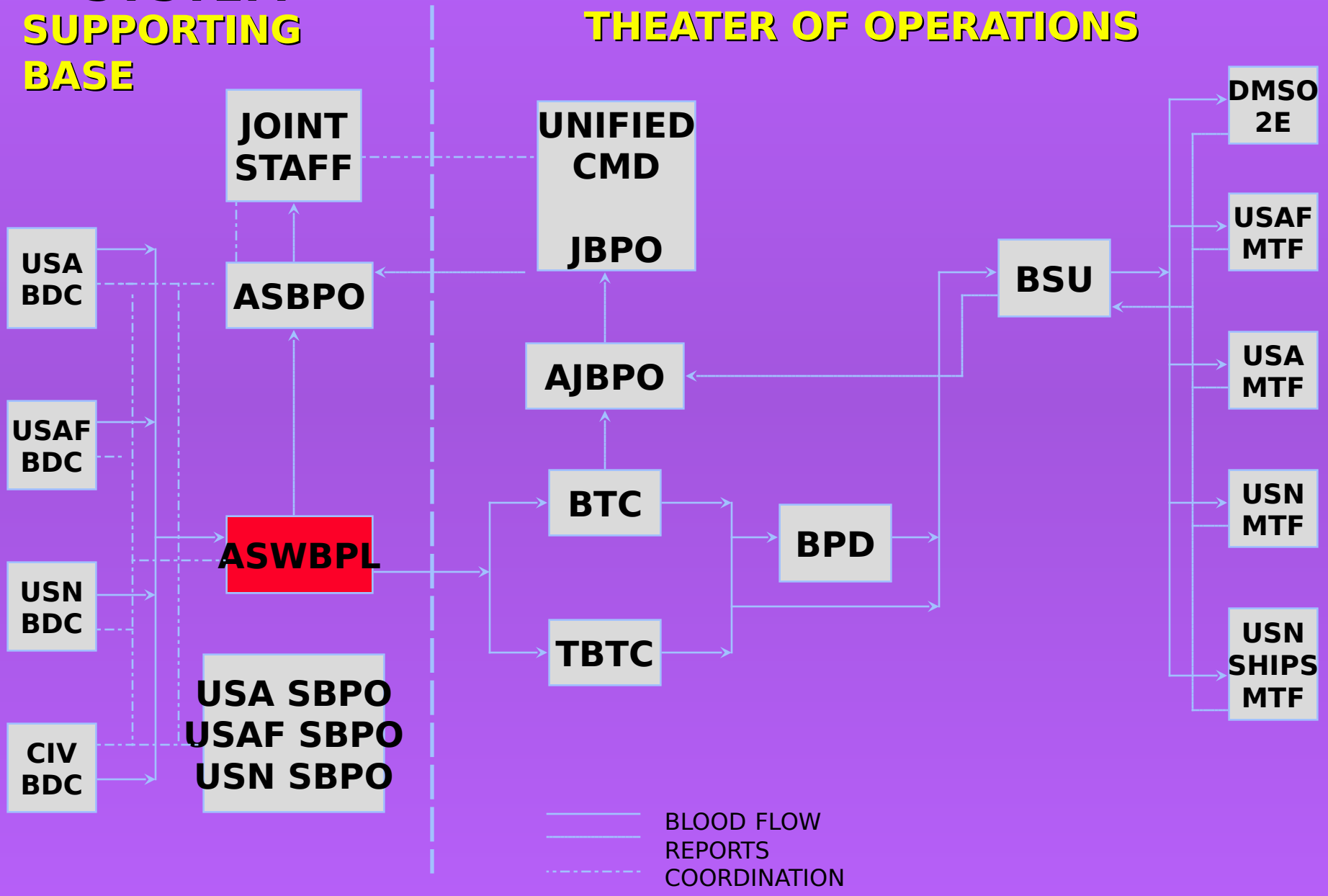
Earliest Arrival Date

Latest Arrival Date
Required Delivery Date

ARMED SERVICES BLOOD DISTRIBUTION SYSTEM



ARMED SERVICES BLOOD DISTRIBUTION SYSTEM

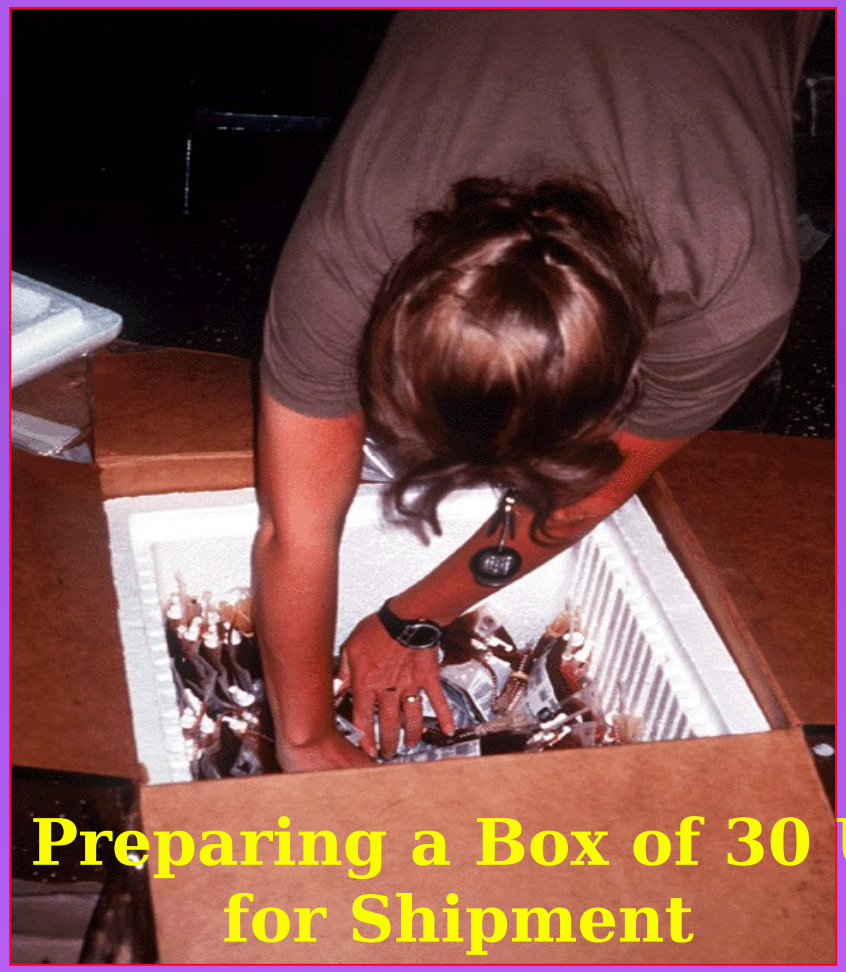


Armed Services Whole Blood Processing Laboratory (ASWBPL)

- **Locations**
  - **ASWBPL East, McGuire AFB, NJ**
  - **ASWBPL West, Travis AFB, CA**
- **Functions**
  - **Confirm Blood Groups and Types**
  - **Contingency Storage 250 RBC Units**
  - **Ship Blood Products to Unified Commands**
  - **Store Frozen Red Blood Cells**

Contingency Storage at McGuire AF

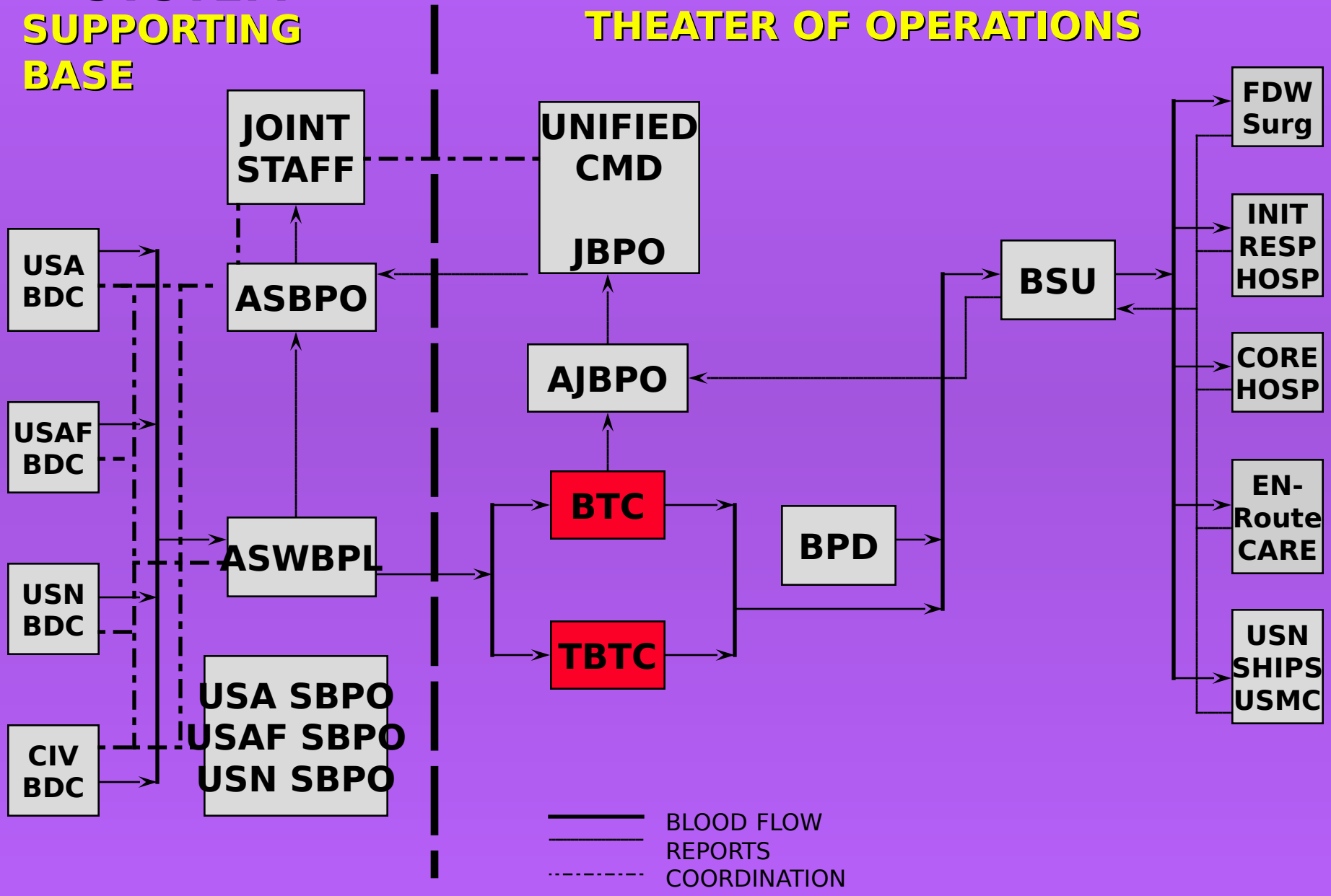
Final Pallet Preparatio n at



Preparing a Box of 30 Ur for Shipment

Pallet Loading for Shipment into the Theater

ARMED SERVICES BLOOD DISTRIBUTION SYSTEM



Blood Transshipment Centers (BTCs / TBTCs)

- **USAF Operated**
  - Usually Located at a Secured Theater Airfield
  - Supporting Commands May Operate BTCs
- **Stores/Ships Up To 7,200 Units Per Day**
- **Functions**
  - Central Receiving Point
  - Inspect Blood, Reice Blood, Store Blood
  - Issue Blood to Blood Supply Units
    - **No transportation assets assigned!**
  - Send Reports to AJBPO/JBPO

Blood Transhipment Centers

Aviano, Italy

Elmendorf, AK

Howard, Panama

Incirlik, Turkey

Lakenheath, UK

Misawa & Yokota, Japan

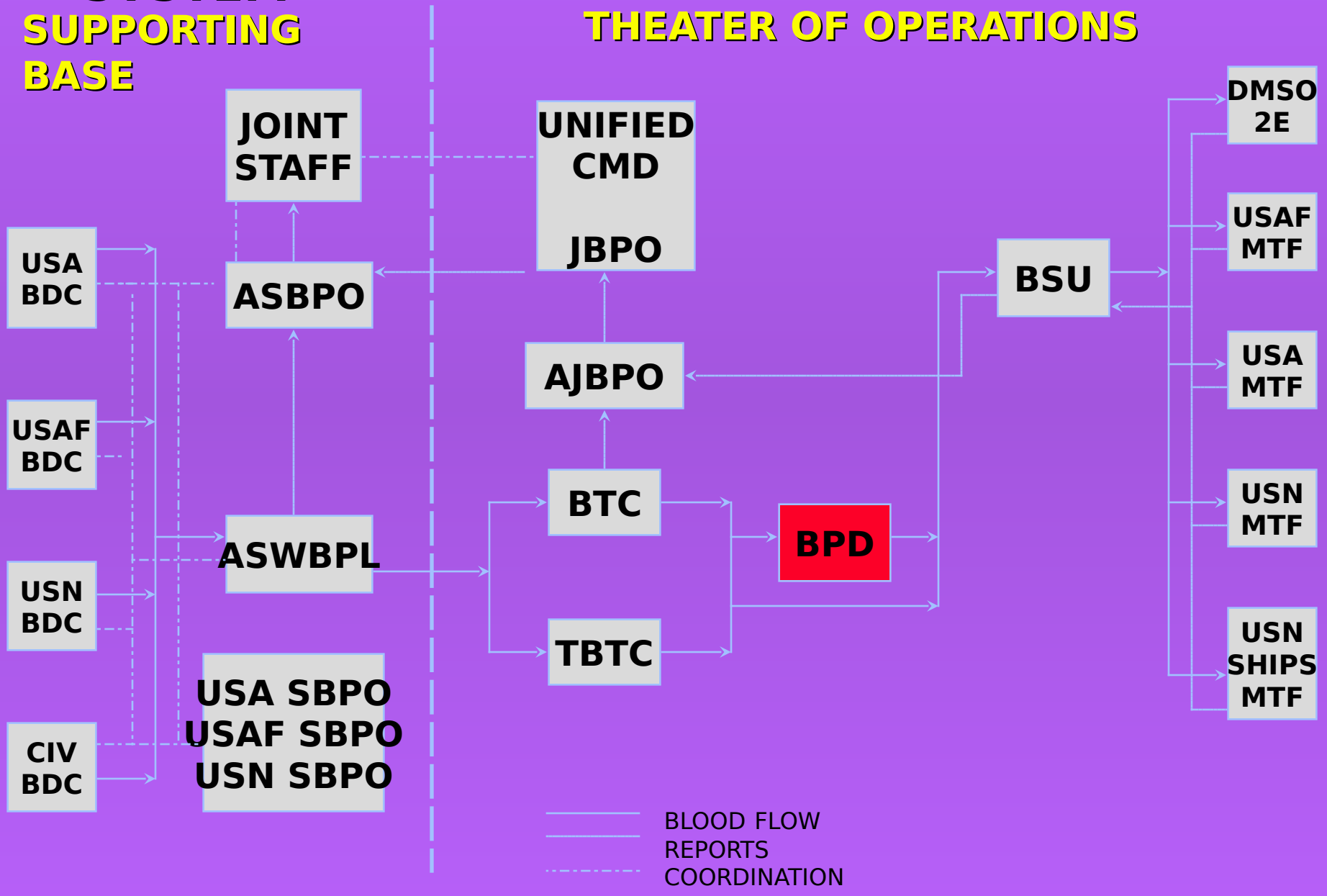
Ramstein, Germany

ARMED SERVICES BLOOD PROGRAM

Transportable Blood Transshipment Center (TBTC)

- Prototype Delivered March 1995 to USAF AETC for Training
- 5 Delivered Apr 97 - Apr 98
  1 To PACAF, 2 To USAFE
  1 To USCENTCOM
  1 To USACOM/USSOUTHCOM
- Transportable via 1-C5, 3-C141, 7-C130 or 1-C17
- Modular Construction With 2 Day Storage of Water and Can Make 1680 lbs or Ice Per Day

ARMED SERVICES BLOOD DISTRIBUTION SYSTEM



ARMED SERVICES BLOOD PROGRAM

Blood Product Depots (BPD)

- Component Operated / Blood Managed by JBPO
- Function
  - Receive and Store Frozen Blood
  - Deglycerolize Frozen Blood
  - Distribute Frozen and Deglycerolized Blood

- Location
  - USPACOM (48,000)
    - Okinawa, Japan
    - Camp Carroll,
    - Camp Humphreys, ROK
  - USEUCOM (6,000)
    - Sigonella, Italy
- **Total - 65,000 Units**
  - CONUS (11,000)

BPD
at
Okinawa

Storage Freezers
(<65°C)
Can hold up to 600 units of FRBCs/freezer

Deglycerolization Cell Washers
One Unit/Machine/Hour
Two Machines/Technician

Shipboard Frozen Blood

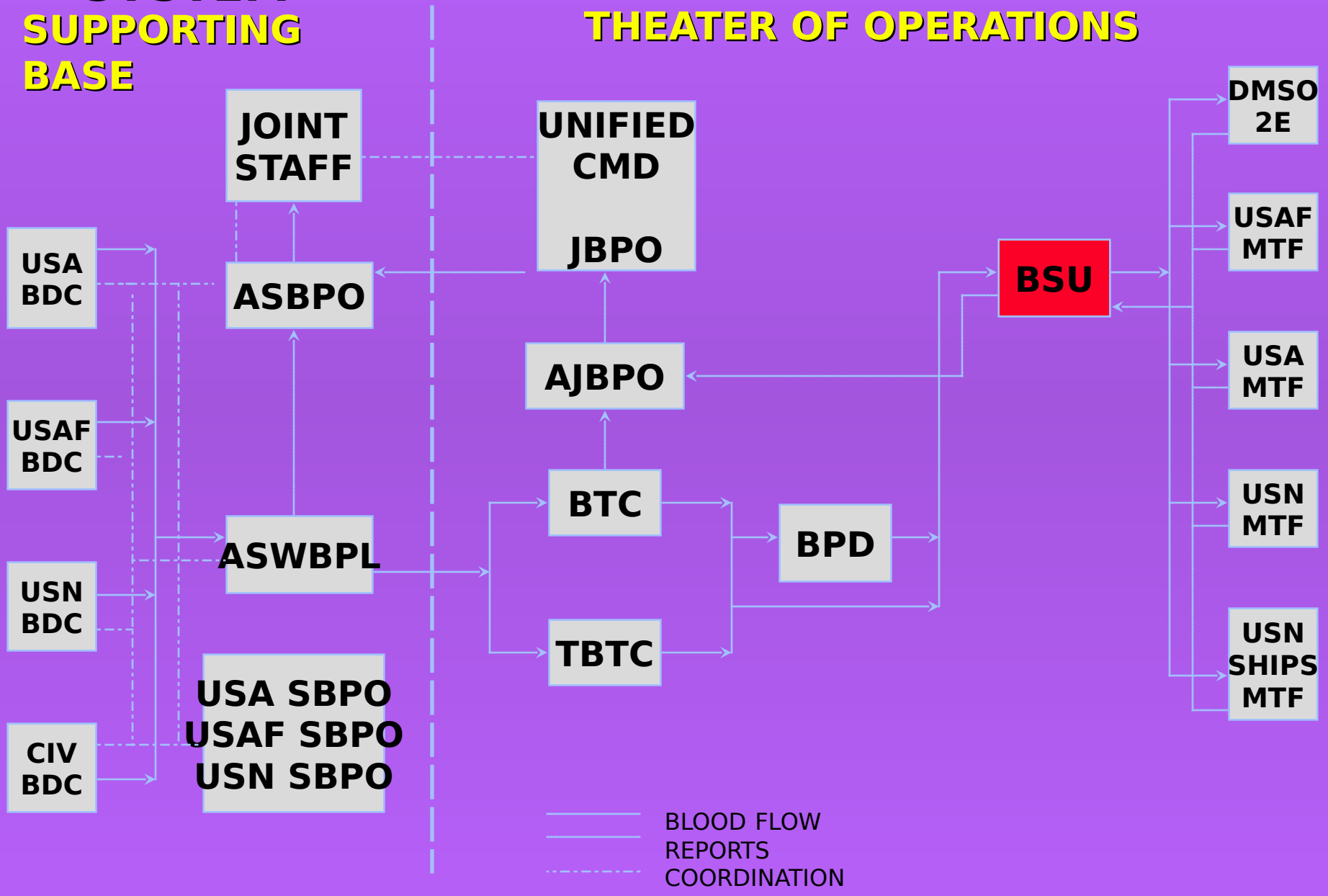
	RCF	
FFP		
LHA	400 (950)	40
LHD	400 (1330)	40
T-AH	400 (2850)	40 (120)

ARMED SERVICES BLOOD PROGRAM

Frozen Blood Update

- **Deglycerolized Frozen Red Blood Cells**
  - **Shelf-Life 24hrs Peacetime**
  - **3 Days During Contingencies**
- **Extended Shelf-Life With a Closed System**
  - **Thawed Blood Processing System (Automated)**
  - **Glycerolizing Within a Closed System**
- **Frozen Red Cell Expiration - Currently 10 Years**
  - **Expected Extension to 15-20 years**

ARMED SERVICES BLOOD DISTRIBUTION SYSTEM

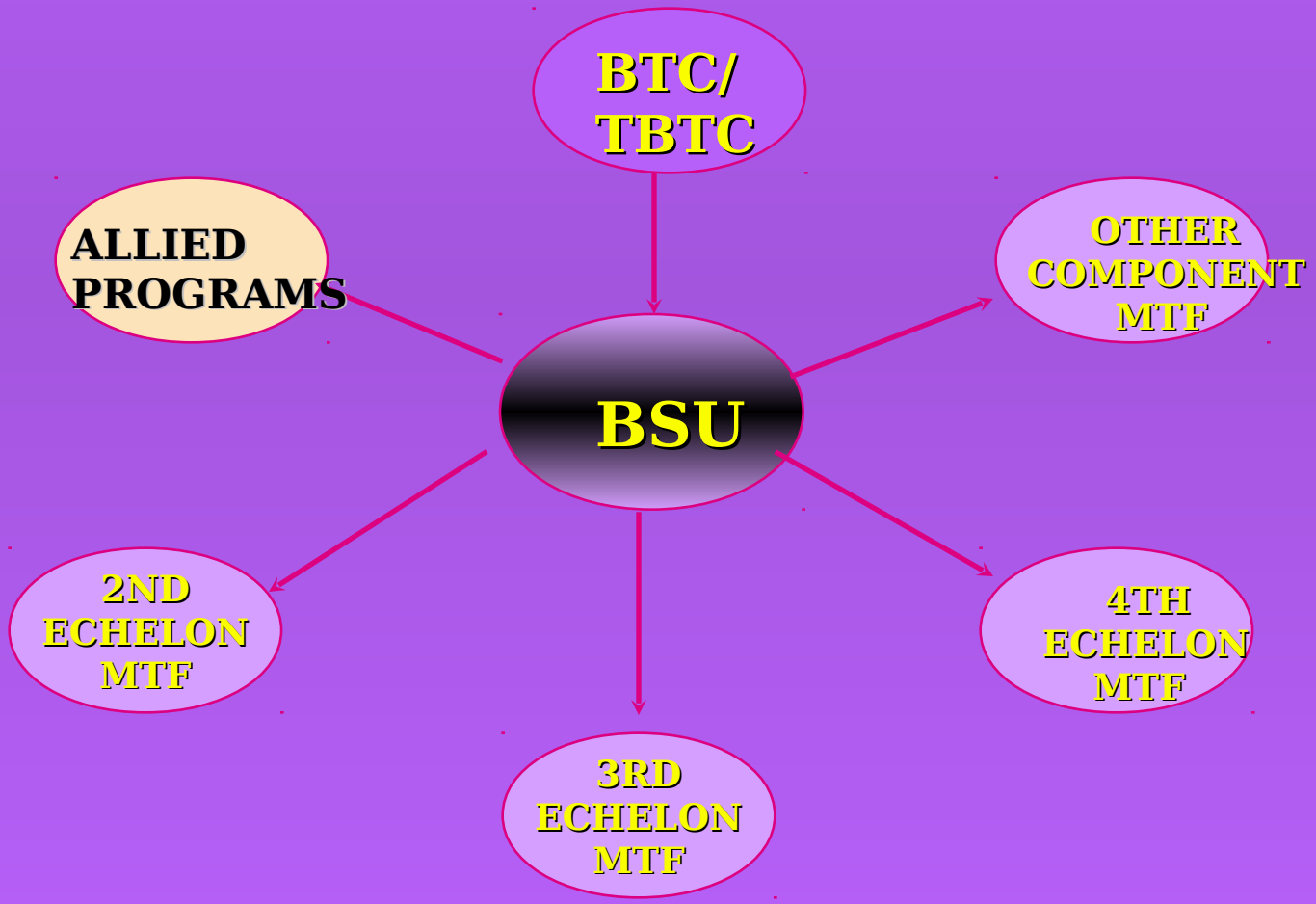


Blood Supply Units (BSU)

- Component Operated
- Functions
  - Receive and Inspect Blood and Blood Products
  - Store and Re-ice Blood Products
    - Army Blood Platoon Stores up to 3600 Units
  - Issue Blood Products to MTFs
  - May Operate a Blood Product Depot
  - May Collect Blood In Emergencies

ARMED SERVICES BLOOD PROGRAM

Component Area Blood Distribution



ARMED SERVICES BLOOD PROGRAM

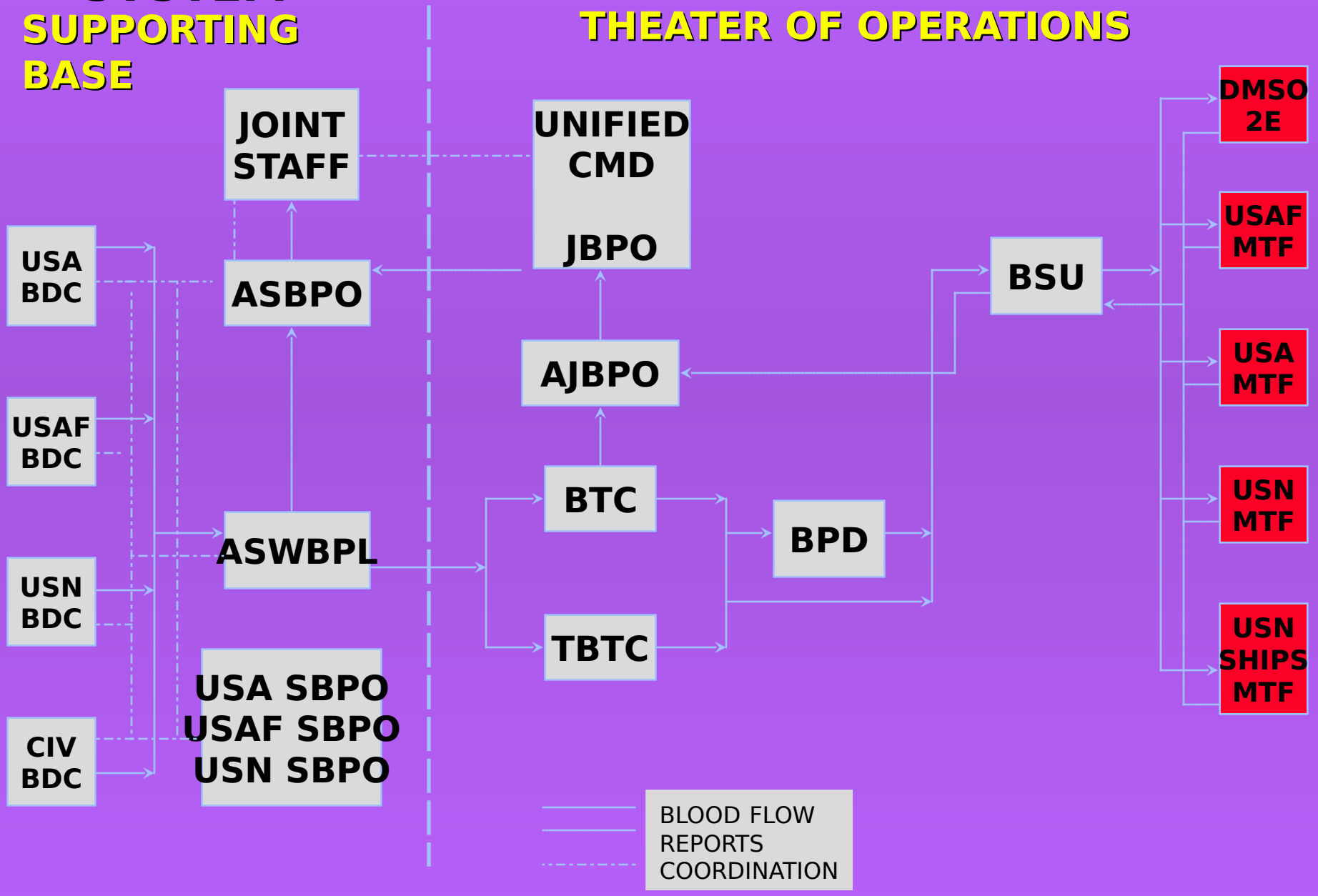
Blood Product Transportation

- **Air - Strategic - 463L Pallet - 120 Boxes / 3,600 RBC Units**
- **Air - Tactical**
  - **Fixed Wing**
    - **463L Pallet - 120 Boxes / 3,600 RBC Units**
    - **Container Delivery (CDS) - 48 Boxes / 1,440 Units**
  - **Helicopter**
    - **UH60 - 50 Boxes (Inside) / 48 Boxes (Slingload)**
    - **UH-1 - 30 Boxes (Inside) / 40 Boxes (Slingload)**
- **Ground**

Causality Treatment Ship
Can serve as a BSU

Hospital Ship

ARMED SERVICES BLOOD DISTRIBUTION SYSTEM



Medical Treatment Facilities (MTF)

- **Component Operated**
- **Functions**
  - **Receive and Inspect Blood Products**
  - **Store Blood and Blood Products**
  - **Crossmatch Blood (3E/4E)**
  - **Transfuse Blood and Blood Products**
  - **Store Blood**

BLOOD PRODUCTS

PRODUCT	UNIT OF ISSUE	SHELF LIFE FOR STORAGE	TRANSFUSION	ECHELON AVAILABLE	DISTRIBUTION +/- O	A	B	AB
LIQUID RED BLD CELLS	APPROX. 250 mL	35 DAYS (CPDA-1) 42 DAYS (ADSOL)	35 DAYS (CPDA-1) 42 DAYS (ADSOL)	ECHELON II	100%	-	-	
				ECHELON III&IV	50%	40%	10%	
FROZEN/ DEGLYC OLIZED RED BLD CELLS	APPROX. 250 mL	10 YEARS	3 DAYS (POST-WASH)	ECHELON III & ECHELON IV	100%	-	-	
FRESH FROZEN PLASMA	APPROX. 250 mL	1 YEAR	24 HRS POST-THAW	ECHELON III AND ECHELON IV	-	50%	25%	25
PLATELET CONCEN-TRATE	APPROX. 60 mL	5 DAYS	6 HRS POOL	ECHELON III AND ECHELON IV	50%	50%		

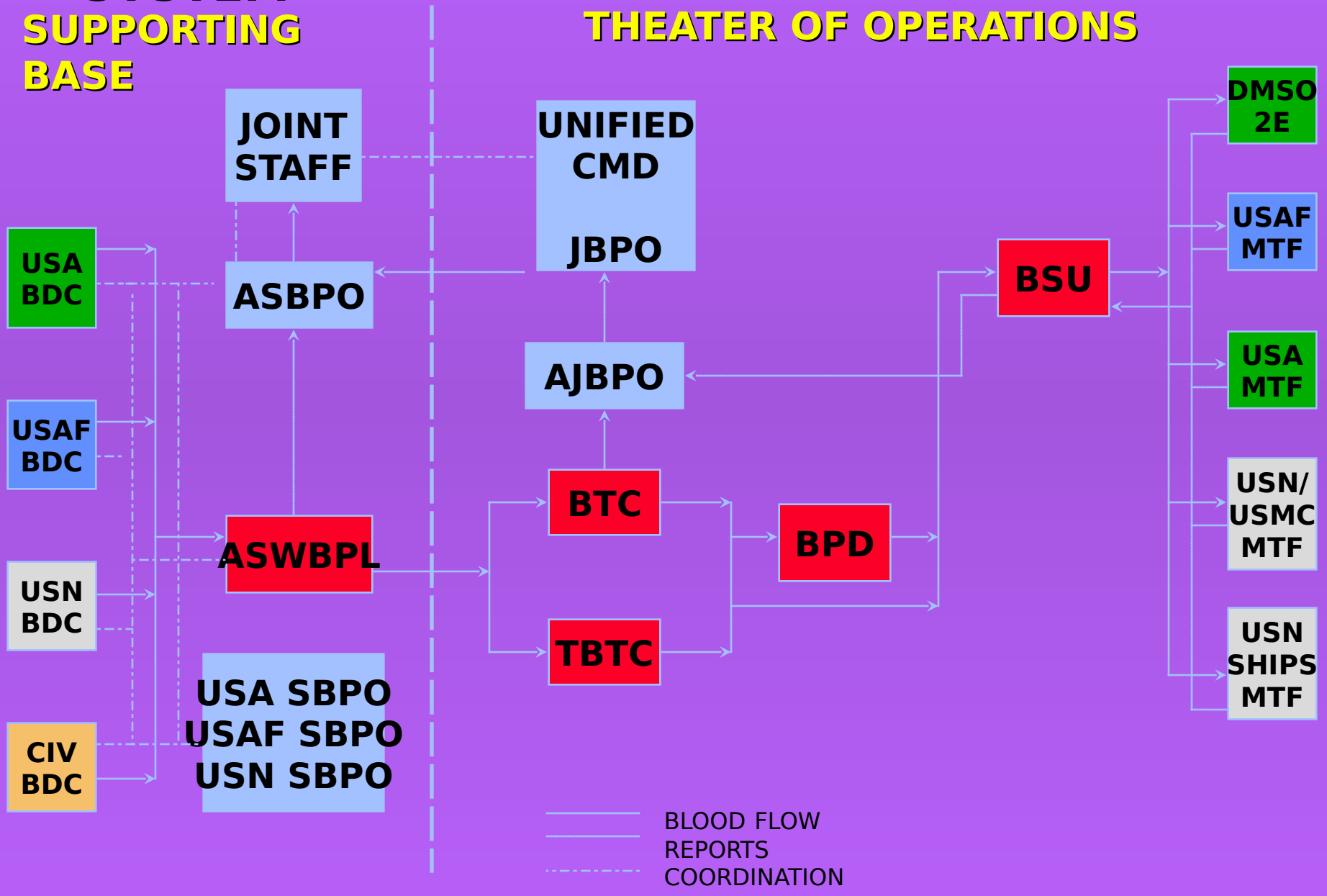
BLOOD BANK PROCEDURES BY TREATMENT LEVEL

TREATMENT LEVEL	BLOOD PRODUCT	ABO & Rh GROUP	TRANSFUSION SERVICE PROCEDURES	STORAGE CAPACITY	BLOOD SUPPLY
1st RESPONSE	NONE	NONE	NONE	NONE	NONE
FORWARD SURGERY	RED BLOOD CELLS	O Rh + -	NONE	50 UNITS RBC PER MED FLD REFRIGERATOR	BSU OR THEATER HOSP
THEATER HOSPITAL CSH ATH FH Ships	RED BLOOD CELLS	O, A, B Rh + -	ABO/Rh GROUP. PATIENT AND DONOR RBCs ** IMED. SPIN CROSSMATCH	480 UNITS LIQUID RBCs CSH/ATH/FH 840/LHD/LHA 2000/Hosp Shp	BSU
	FROZEN/ DEGLYCEROLIZED RBC*	O Rh + -	N/A	400 UNITS FROZEN/ LH or Hosp Shp	BSU OR BPD
	FRESH FROZEN PLASMA (FFP)*	A, B, AB Rh + -	N/A	20 UNITS	BSU
	PLATELET CONCENTRATE*	0, A Rh + -	N/A	5 UNITS	BSU

DEFINATIVE CARE IN CONUS MTF OR OTHER MEDICAL CENTER WITH BROAD TRANSFUSION MEDICINE CA

* NOT AVAILABLE AT EVERY MTF ** NOT NECESSARY IF ASWBPL HAS VERIFIED THE ABO

ARMED SERVICES BLOOD DISTRIBUTION SYSTEM



Walking Donor Program

- Pre identify potential donors
- Screen on day of donation
- Collect samples for IDT

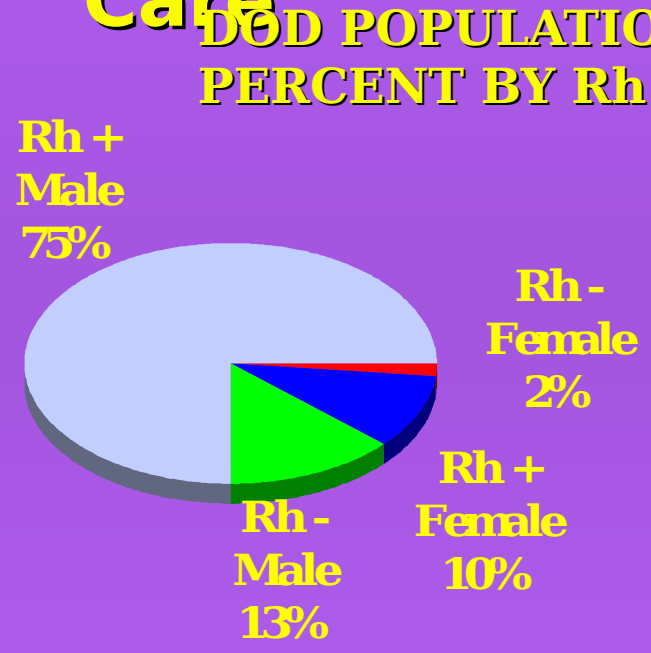
Pre deployment - Walking Donors

- Request TAV 90 - 120 days before deployment
- Sponsor Blood Drive
- Coordinate deployment liquid blood requests with local CONUS BDC 15 - 30 days pre deployment

ARMED SERVICES BLOOD PROGRAM

Emergency Transfusions at the Second Echelon of Medical Care

- During contingencies, the Services will provide Rh negative packed cells to Rh negative male and female patients based on the Rh blood type on the ID card or Tag



Rh+ (Rh POSITIVE) Rh- (Rh NEGATIVE)
AS OF DEC 1993

ARMED SERVICES BLOOD PROGRAM

Defense Blood Standard System - DBSS

- **Automated Information System for:**
  - **ASWBPL/BTC/TBTC**
  - **Blood Donor Centers Including Mobile Collection, Donor Deferral and Processing**
  - **MTF Transfusion Service and Inventory Operations**
- **Supports Tracking of Blood Components, Blood Donors and Recipients (Look-Back)**
- **Information for Blood Management and Reporting**

Record Keeping

* Blood Shipments
* Blood Dispositions
* Blood Collections
* Blood Transfusion

Research and Development

- **Thawed Blood Processing System - Automated & Closed System for Deglycerolization of Frozen RBC**
- **Platelets (Frozen, Lyophilized, Storage Solutions)**
- **Logistically Supportable and Safer Oxygen Carrier (HBOC)**
- **Reduce Requirements - Fibrin Glue Bandage/Sealant**
- **Freeze Dried Plasma**
- **Longer Shelf Life (10-16 Weeks) for PRBCs**

Wartime Support - Desert Storm

Military BDC Shipments - RBC

August 1990 - March 1991

85,535

Civilian Contract Shipments - RBC

December 1990 - February 1991

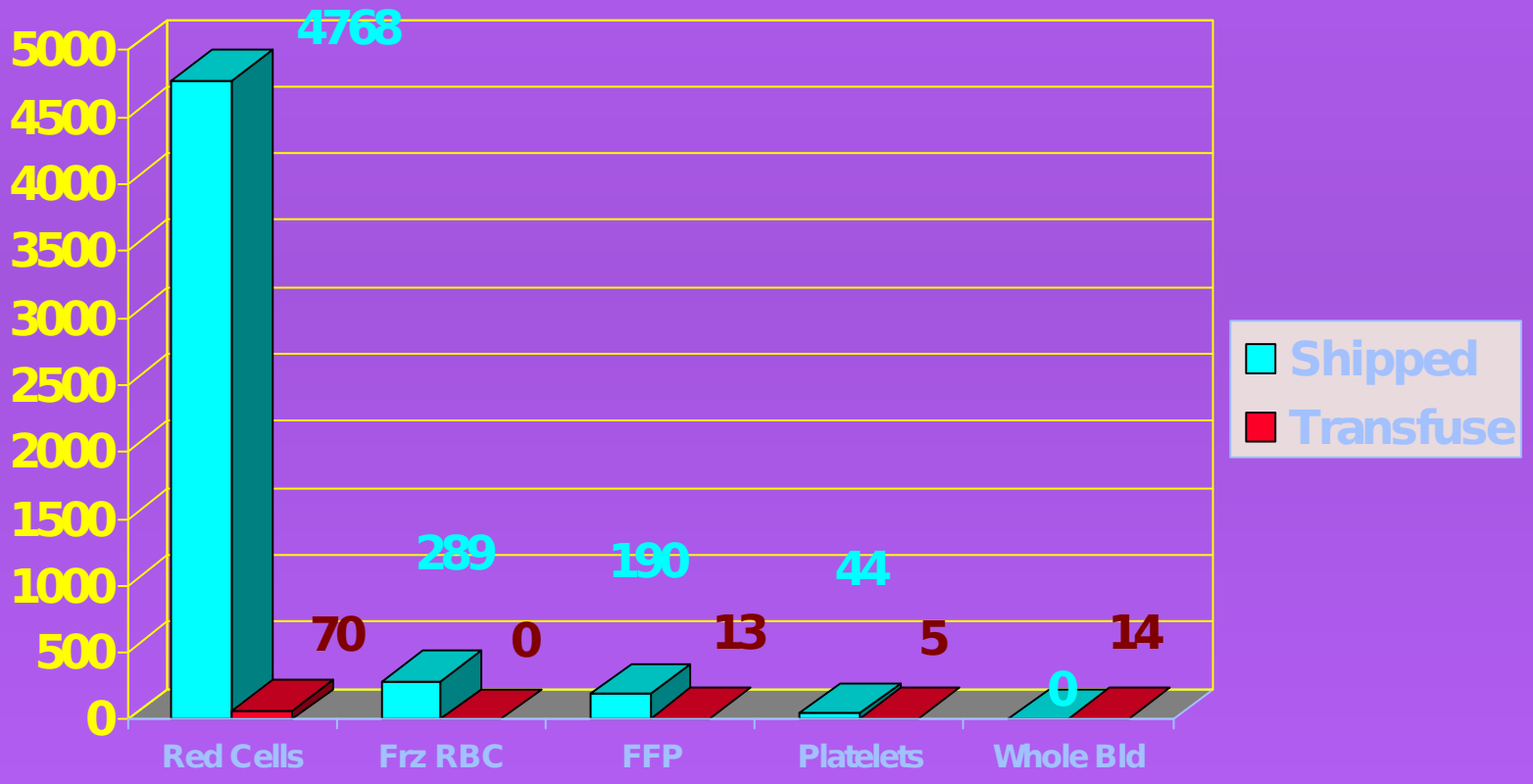
21,004

Total RBC Shipments - 106,539

Total Transfusions - < 2,000

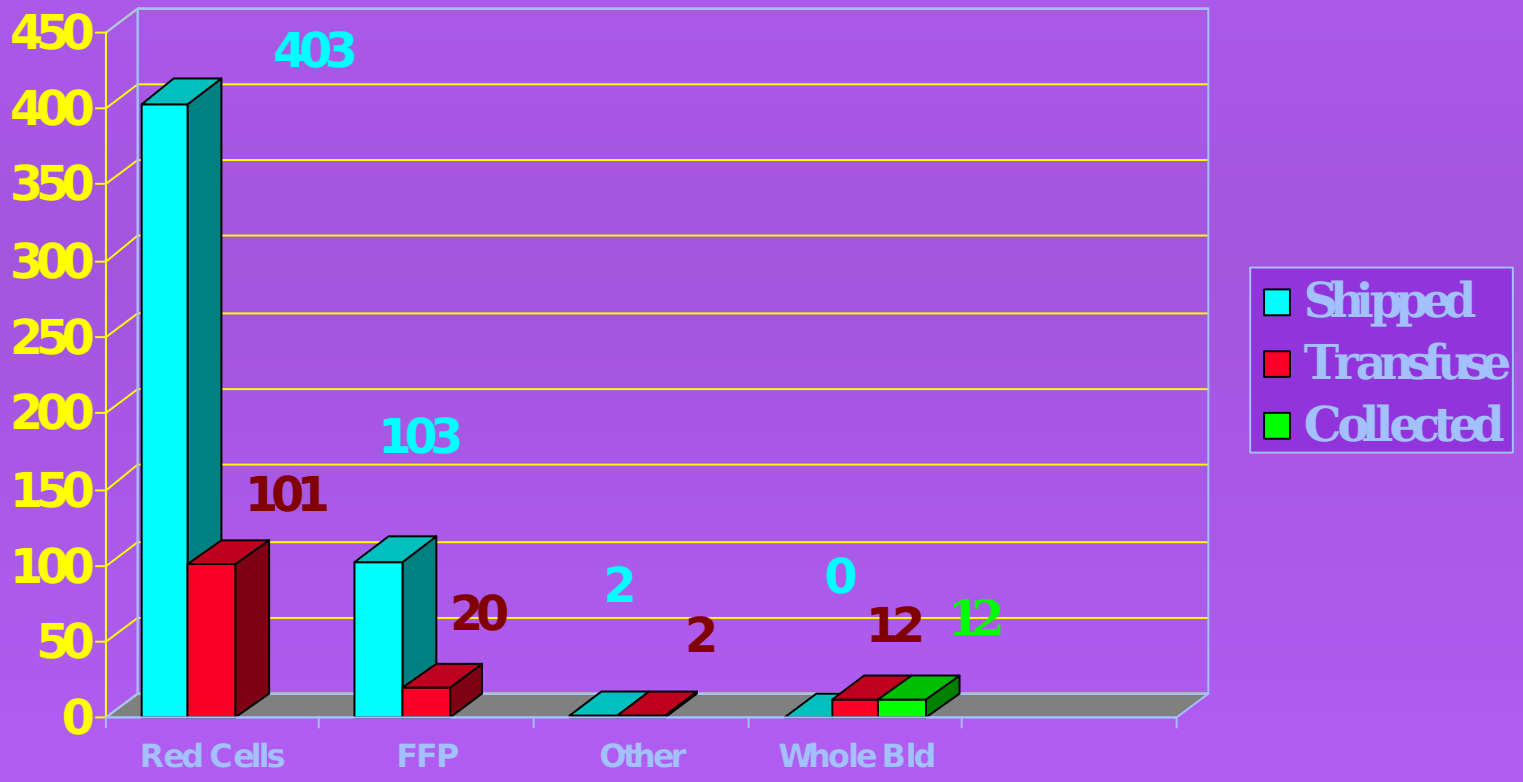
Bosnia - Blood Products

As of September 1999



Kosovo - Blood Products

As of September 1999



This concludes my briefing. Are there any questions?